

Remarks

Claims 1-68 are pending in the above-captioned patent application following this amendment. Claims 1-7, 9-21, 23-35 and 37-48 were rejected. Claims 8, 22 and 36 have been withdrawn from consideration by the Patent Office. Claims 6, 20 and 39 have been amended and claims 49-68 have been added, all for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office pursuant to 65 Fed. Reg. 54603 (September 8, 2000), even though the Applicant believes that the previously pending claims were allowable. The amended claims and the new claims are all believed to read on the elected species (Species I).

Support for the amendments to the claims and for the new claims can be found throughout the originally filed application, including the originally filed claims, the drawings and the specification. More specifically, support for the amendments to claims 6, 20 and 39 and for new claims 49-68 can be found at least in claims 1-48, in Figures 2A-2C, and the specification at page 8, line 25 through page 14, line 17.

No new matter has been added by this amendment. Consideration of the Application is respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 1-5, 9-19, 23-35, 37-38 and 41-48 are rejected under 35 U.S.C. § 102(b) as being anticipated by Wasson (US 5,295,031). The Applicants respectfully traverse the rejection of claims 1-5, 9-19, 23-35, 37-38 and 41-48 on the grounds that Wasson does not teach or suggest the features of these claims. Therefore, the rejection of these claims is unsupported by Wasson, and should be withdrawn.

Claims 1-5, 9-15, 32-35, 37-38 and 41-46:

The Patent Office states in its rejection that "Wasson shows ... the actuator hub being subjected to a resultant force that can cause track misregistration of the data transducer during movement of the actuator assembly ... and a positioner ... including (i) a magnet assembly ... and (ii) a first conductor region 188 (See Fig. 19 ... with added marks) that cooperates with the magnet assembly to generate a first force that is directed at an angle having an absolute value that is greater than zero degrees and less than

approximately 45 degrees relative to the longitudinal axis of the actuator assembly inherently at least partially offset the resultant force at the actuator hub.” The Applicants respectfully disagree with the characterization of Wasson provided by the Patent Office, for the following reasons.

First, the Patent Office has simply identified an arbitrary section of a coil that generates a force that cannot be separated from the surrounding portions of the same coil. In other words, the force generated by the section of coil indicated in the “added marks” annotated by the Patent Office is not, in and of itself, a separate force. Instead, the random section of coil chosen by the Patent Office contributes to an overall force of the entire continuous section of coil positioned between the magnet assembly.

Second, Wasson does not appear to identify any specific resultant force, including the direction and/or magnitude of such resultant force. Importantly, Wasson does not teach or suggest offsetting any such resultant force using a specific region of the coil, because no specific resultant force is described or illustrated in Wasson. Thus, even if the force generated by the arbitrary section of coil could be isolated in some manner (which Applicants dispute based on the position of the identified section of coil within a greater length of coil), Wasson does not teach or suggest that this particular force (or any force generated by the coils) at least partially offsets a resultant force at the actuator hub. In fact, Wasson appears to teach to the contrary.

Wasson discusses “unwanted vectors” indicated by a’, b’ and c’ in Figure 20, which shows the torque deriving vectors with the geometry shown in Figure 19. (Col. 12, lines 65-67). “These unwanted vectors, while being of small enough extent to provide for an effective device, preferable are to be avoided inasmuch as they are seen to be additive and may create a torque of direction opposite that desired.” (Col. 13, lines 12-19; emphasis added). Thus, even if a resultant force were disclosed by Wasson (which Applicants dispute), the small vectors would not offset the resultant force, but would appear to be additive to it.

In contrast to Wasson, claim 1 is directed toward a disk drive that requires “a storage disk having a plurality of tracks; a data transducer; an actuator assembly that supports the data transducer over one of the tracks, the actuator assembly having a rotatable actuator hub and a longitudinal axis, the actuator hub being subjected to a

resultant force that can cause track misregistration of the data transducer during movement of the actuator assembly; and a positioner that moves the actuator assembly relative to the storage disk, the positioner including (i) a magnet assembly that generates a magnetic field, and (ii) a first conductor region that cooperates with the magnet assembly to generate a first force that is directed at an angle having an absolute value that is greater than zero degrees and less than approximately 45 degrees relative to the longitudinal axis of the actuator assembly to at least partially offset the resultant force at the actuator hub.” These features are not taught or suggested by Wasson. Therefore, a rejection of claim 1 under 35 U.S.C. § 102(b) based on Wasson is unsupported and should be withdrawn. Because claims 2-5 and 9-15 depend directly or indirectly from claim 1, a rejection of these claims is also unsupported by Wasson and should therefore be withdrawn.

Further, claim 32 requires “a storage disk having a plurality of tracks; a data transducer; an actuator assembly that supports the data transducer over one of the tracks, the actuator assembly having a rotatable actuator hub and a longitudinal axis, the actuator hub being subjected to a resultant force that can cause track misregistration of the data transducer during movement of the actuator assembly; and a positioner coupled to the actuator assembly, the positioner moving the actuator assembly relative to the storage disk, the positioner including (i) a conductor assembly having a first conductor region, and (ii) a magnet assembly that generates a magnetic field, the first conductor region interacting with the magnetic field to at least partially offset the resultant force at the actuator hub.” These features are not taught or suggested by Wasson. Therefore, a rejection of claim 32 under 35 U.S.C. § 102(b) based on Wasson is unsupported and should be withdrawn. Because claims 33-35, 37-38 and 41-43 depend directly or indirectly from claim 32, a rejection of these claims is also unsupported by Wasson and should therefore be withdrawn.

Claim 44 is directed to a method that requires the steps of “supporting the data transducer with an actuator assembly having a longitudinal axis; and positioning the actuator assembly utilizing a positioner that includes (i) a magnet assembly that generates a magnetic field, and (ii) a first conductor region that cooperates with the magnet assembly to generate a first force that is directed at an angle having an

absolute value that is greater than zero degrees and less than approximately 45 degrees relative to the longitudinal axis of the actuator assembly.” These steps are not taught or suggested by Wasson. Therefore, a rejection of claim 44 under 35 U.S.C. § 102(b) based on Wasson is unsupported and should be withdrawn. Because claims 45-46 depend directly or indirectly from claim 44, a rejection of these claims is also unsupported by Wasson and should therefore be withdrawn.

Claims 16-19, 23-31 and 47-48:

The Patent Office appears to use the same rationale to reject claim 16 as that used to reject claim 1. The Applicants infer that the rejection assumes that any arbitrary section of the coil can be chosen to have “a first conductor region that is positioned at an angle having an absolute value of greater than approximately 45 degrees and less than 90 degrees relative to the longitudinal axis of the actuator assembly.” However, again, Wasson does not teach or suggest that this specific section of coil, in and of itself, at least partially offsets the resultant force at the actuator hub.

In contrast to Wasson, claim 16 requires “a storage disk having a plurality of tracks; a data transducer; an actuator assembly that supports the data transducer over one of the tracks, the actuator assembly having a rotatable actuator hub and a longitudinal axis, the actuator hub being subjected to a resultant force that can cause track misregistration of the data transducer during movement of the actuator assembly; and a positioner coupled to the actuator assembly, the positioner moving the actuator assembly relative to the storage disk, the positioner including (i) a magnet assembly that generates a magnetic field, and (ii) a conductor assembly having a first conductor region that is positioned at an angle having an absolute value of greater than approximately 45 degrees and less than 90 degrees relative to the longitudinal axis of the actuator assembly, the first conductor region interacting with the magnetic field to at least partially offset the resultant force at the actuator hub.” These features are not taught or suggested by Wasson. Therefore, a rejection of claim 16 under 35 U.S.C. § 102(b) based on Wasson is unsupported and should be withdrawn. Because claims 17-19 and 23-31 depend directly or indirectly from claim 16, a rejection of these claims is also unsupported by Wasson and should therefore be withdrawn.

Further, claim 47 is directed toward a method that requires the steps of “supporting the data transducer with an actuator assembly having a longitudinal axis; and positioning the actuator assembly utilizing a positioner that includes (i) a magnet assembly that generates a magnetic field, and (ii) a first conductor region that is positioned at an angle having an absolute value of greater than approximately 45 degrees and less than 90 degrees relative to the longitudinal axis of the actuator assembly.” These steps are not taught or suggested by Wasson. Therefore, a rejection of claim 47 under 35 U.S.C. § 102(b) based on Wasson is unsupported and should be withdrawn. Because claim 48 depends from claim 47, a rejection of this claim is also unsupported by Wasson and should therefore be withdrawn.

In addition to the deficiencies in the rejection noted above, the rejection of the dependent claims is also believed to be unsupported and/or unaddressed. As an example, the rationale for the rejection of claim 15, 31 and 43 is completely absent, as a discussion of these claims is not provided. Further, for many of the other dependent claims, the Patent Office simply states the features of the claims, without any explanation of how the reference actually teaches those features. (See, for example, the rejection of claims 3, 16, 17, 29, 34).

Rejections Under 35 U.S.C. § 103

Claims 6, 7, 20, 21, 39 and 40 are rejected under 35 U.S.C. § 103 as being unpatentable over Wasson. The Applicants respectfully traverse the rejection of claims 6, 7, 20, 21, 39 and 40 on the grounds that Wasson does not teach or suggest the features of these claims. Therefore, the rejection of these claims is unsupported by Wasson, and should be withdrawn. Further, as provided above, claims 6, 20 and 39 have been amended for reasons unrelated to patentability.

As provided above, the rejection of claim 1 is believed to be unsupported by Wasson. Thus, claim 1 is believed to be patentable. Because claims 6 and 7 depend from claim 1, they are also believed to be patentable. In addition, the rejection of claim 16 is believed to be unsupported by Wasson. Thus, claim 16 is believed to be patentable. Because claims 20 and 21 depend from claim 16, they are also believed to be patentable. Finally, the rejection of claim 32 is believed to be unsupported by

Wasson. Thus, claim 32 is believed to be patentable. Because claims 39 and 40 depend from claim 32, these claims are also believed to be patentable. Therefore, the rejection of claims 6, 7, 20, 21, 39 and 40 should be withdrawn, and these claims should be allowed.

New Claims

New claims 49-68 have been added by this amendment. New claims 49-68 are of a slightly different scope than the previously pending claims. However, a rejection of these claims would be unsupported by Wasson. Therefore, claims 49-68 should be allowed. Further, all new claims 49-68 are believed to read on the elected species.

In addition to the discussion of Wasson above, the Applicants provide the following analysis. The sections of coil selected by the Patent Office in its added marks on Figure 19 of Wasson are arbitrary, and are not defined or bounded in any way, or by any other structures.

In contrast to Wasson, new claim 49 requires "a storage disk having a plurality of tracks; a data transducer; an actuator assembly that supports the data transducer over one of the tracks, the actuator assembly having a rotatable actuator hub and a longitudinal axis, the actuator hub being subjected to a resultant force that can cause track misregistration of the data transducer during movement of the actuator assembly; and a positioner that moves the actuator assembly relative to the storage disk, the positioner including (i) a magnet assembly that generates a magnetic field, the magnet assembly including a first magnet having an inner edge and an opposed outer edge relative to the actuator hub, and (ii) a first conductor region that is positioned between and defined by the edges of the first magnet, the first conductor region cooperating with the magnet assembly to generate a first force that is directed at an angle having an absolute value that is greater than zero degrees and less than approximately 45 degrees relative to the longitudinal axis of the actuator assembly to at least partially offset the resultant force at the actuator hub."

These features are not taught or suggested by Wasson. Therefore, a rejection of claim 49 based on Wasson would not be supported. Because claims 50-58 depend from claim 49, a rejection of these claims based on Wasson would also be unsupported.

Further, new claim 59 requires “a storage disk having a plurality of tracks; a data transducer; an actuator assembly that supports the data transducer over one of the tracks, the actuator assembly having a rotatable actuator hub and a longitudinal axis, the actuator hub being subjected to a resultant force that can cause track misregistration of the data transducer during movement of the actuator assembly; and a positioner coupled to the actuator assembly, the positioner moving the actuator assembly relative to the storage disk, the positioner including (i) a magnet assembly that generates a magnetic field, the magnet assembly including a magnet having an inner edge and an opposed outer edge relative to the actuator hub, and (ii) a conductor assembly having a first conductor region that is positioned between and defined by the edges of the magnet, the first conductor region being positioned at an angle relative to the longitudinal axis of the actuator assembly having an absolute value of greater than approximately 45 degrees and less than 90 degrees, the first conductor region interacting with the magnetic field to at least partially offset the resultant force at the actuator hub.”

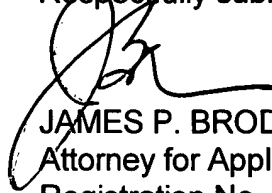
These features are not taught or suggested by Wasson. Therefore, a rejection of claim 59 based on Wasson would not be supported. Because claims 60-68 depend from claim 59, a rejection of these claims based on Wasson would also be unsupported.

Conclusion

In conclusion, Applicant respectfully asserts that claims 1-68 are allowable for the reasons set forth above, and that the application is now in a condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-487-4077 for any reason that would advance the instant application to issue.

Dated this the 7th day of October, 2005.

Respectfully submitted,



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